(c) a manifold in fluid communication with the substantially discrete flow passages to allow a potential from a potential source to promote fluid movement through the passages from a first potential to a second potential, such fluid movement for thermally affecting the first cover layer of material for promoting heat transfer between the moving fluid and the first cover layer.

2. (Amended) The heat exchanger of claim 1, wherein said first cover layer comprises a second layer of polymeric film material having first and second major surfaces, the first major surface of the second layer including a structured surface having a plurality of flow channels, and the second major surface of the second layer providing the closing surface making the plural substantially discrete flow passages of the first layer.

3. (Amended) The heat exchanger of claim 2, further comprising at least one additional layer of polymeric film material having first and second major surfaces, the first major surface of each additional layer including a structured surface having a plurality of flow channels, the first, second and additional layers of polymeric film material being stacked on top of one another to form a stacked array having a plural ordered rows of substantially discrete flow passages.

4. (Amended) The heat exchanger of claim 1, further comprising a second layer of polymeric film material having first and second major surfaces, the first major surface of the second layer including a structured surface having a plurality of flow channels, the second layer being stacked on top of the first cover layer that overlies the first layer to form a stacked array.

5. (Amended) The heat exchanger of claim 4, further comprising a second cover layer of material, wherein at least a portion of the second major surface of the second layer of polymeric film material is secured to the first cover layer, and the second cover layer is secured to at least a portion of the structured surface of the second layer of polymeric film material to make substantially discrete flow passages.

9. (Amended) The heat exchanger of claim 1, further comprising a plurality of layers of polymeric film material, each of the plurality of layers of polymeric film material having a first major surface defined by a structured surface formed within the layer, the structured surface having a plurality of flow channels that extend from a first point to a second point along the surface of the layer, the plurality of flow channels having a minimum aspect ratio of the channel's length to its hydraulic radius of about 10:1 and a hydraulic radius of no greater than about 300 micrometers, and wherein the plurality of layers of polymeric film material and the first cover layer are arranged in a stacked array, with the first cover layer interposed between an adjacent pair of layers of polymeric film material so that the first cover layer covers at least a portion of the structured surface of one of the adjacent pair of layers of polymeric film material to make substantially discrete flow passages.

10. (Amended) The heat exchanger of claim 9, further comprising a plurality of cover layers interposed between the layers of polymeric film material and covering at least portions of the structured surfaces of such layers of polymeric film material and to make plural ordered rows of substantially discrete flow passages.

12. (Amended) The heat exchanger of claim 9, wherein the flow channels of adjacent layers of polymeric film material are substantially linear and are aligned in an angular relationship to each other.

15. (Amended) The heat exchanger of claim 1, wherein the first cover layer is more thermally conductive than the first layer of polymeric film material.

18. (Amended) The heat exchanger of claim 10, wherein the plurality of cover layers are more thermally conductive than the layers of polymeric film material.

21. (Amended) A method of transferring heat between a heat transfer fluid and another media that is to be thermally effected in proximity to a heat exchanger, comprising the steps of:

(a) providing a heat exchanger comprising a layer of polymeric film material having first and second major surfaces, wherein the first major surface includes a structured surface having a plurality of flow channels that extend from a first point to a second point along the surface of the layer,

(b) connecting a source of heat exchange fluid having a predetermined initial temperature to [the] flow passages comprised of the flow channels;

(c) placing the heat exchanger in a position to conduct heat between the other media and the fluid within the heat exchanger; and

(d) providing a source of potential over the flow passages of the heat exchanger, and thereby moving the fluid through the flow passages from a first potential to a second potential, the movement of the fluid causing heat transfer between the moving fluid and the other media so as to thermally affect the media in proximity to the heat exchanger.

22. (Amended) The method of transferring heat of claim 21, further including a step of providing a cover layer to a portion of the structured surface of the layer of polymeric film material having a closing surface to cover at least a portion of the flow channels to make plural substantially discrete flow passages, and wherein the cover layer is placed in a position to conduct heat between the other media and the fluid within the heat exchanger.

REMARKS

This Amendment is responsive to the Office Action of March 30, 2000, in which all pending claims 1-5, 9, 10 and 12-24 were rejected and claims 6-8, 11, and 25-30 were withdrawn from consideration. By this amendment, claims 1-5, 9-10, 12, 15, 18, and 21-22 are amended, claims 26-30 are cancelled and all pending claims are presented for reconsideration and allowance.

Rejections under 35 USC 112

Claims 1-5, 9-10 and 12-24 were rejected under 35 USC 112, second paragraph, as being indefinite. The Office Action asserts that even though the term "aspect ratio" is clearly defined within the Specification, user of the term within claim 1 is indefinite. Claims 1 and 9 have been amended to recite that the claimed aspect ratio is of the channel's